

I claim:

1. A method of cleaning surfaces of an anilox roller comprising the steps of:
providing an anilox roller having surfaces to be cleaned of dried ink and other material residue;
providing a source of pressurized steam; and
directing a jet of said pressurized steam from said source onto said surfaces of said anilox roller, thereby removing said dried ink and other material residue from said surfaces of said anilox roller.
2. The method of claim 1, wherein said pressurized steam has a pressure of up to 1600 psi.
3. The method of claim 2, wherein said pressurized steam has a pressure of between 50 and 600 psi.
4. The method of claim 3, wherein said pressurized steam has a pressure of between 50 and 250 psi.
5. The method of claim 1, wherein said pressurized steam has a temperature of up to 350°F.
6. The method of claim 5, wherein said pressurized steam has a temperature of between 220 and 300°F.

7. The method of claim 6, wherein said pressurized steam has a temperature of between 220 and 260°F.

8. The method of claim 1, wherein said pressurized steam has a liquid water content of up to 10%.

9. The method of claim 1, including the further step of directing a stream liquid water onto said surfaces of said anilox roller after said step of directing a jet of said pressurized steam.

10. The method of claim 1, including the further step of providing a surfactant or degreasing compound on the surfaces of said anilox roller before said step of directing a jet of said pressurized steam.

11. The method of claim 1, comprising the further step of collecting the removed ink and other material residue from said roller via gravity-fed liquid collection, vacuum collection, or both.

12. The method of claim 11, wherein said removed ink and other material residue are collected from said roller via vacuum collection.

13. The method of claim 11, comprising the further step of transporting the collected ink and other material residue to a disposal system.

20250912-123-030502

14. The method of claim 13, comprising the further step of disposing of said collected ink and other material residue.

15. An apparatus for cleaning dried ink and other material residue from surfaces of an anilox roller comprising:

a source of pressurized steam;

means for holding and rotating said anilox roller; and

means for directing at least one jet of said pressurized steam onto said surfaces of said anilox roller to remove said dried ink and other material residue.

16. The apparatus of claim 15, wherein said means for directing at least one jet of pressurized steam comprises at least one steam supply line and at least one steam jet nozzle.

17. The apparatus of claim 15, further including a means for directing at least one stream of liquid water onto said surfaces of said anilox roller to rinse away said dried ink and other material residue.

18. The apparatus of claim 17, wherein said means for directing at least one stream of liquid water includes a source of liquid water, a transport line, and a spray nozzle.

19. The apparatus of claim 15, further including a means for directing at least one stream of surfactant or degreasing compound onto the surfaces of said anilox roller.

20. The apparatus of claim 19, wherein said means for directing at least one stream of surfactant or degreasing compound includes a source thereof, a transport line, and an applicator nozzle.

21. The apparatus of claim 15, further comprising means for collecting said removed ink and other material residue from said anilox roller.

22. The apparatus of claim 21, wherein said means for collecting said removed ink and other material residue from said anilox roller comprises at least one of a vacuum collection system, a gravity-fed liquid collection system, or both in combination.

23. The apparatus of claim 22, wherein said means for collecting said removed ink and other material residue from said anilox roller comprises a vacuum collection system.

24. The apparatus of claim 23, wherein said vacuum collection system includes at least one vacuum port and at least one vacuum waste disposal line.

25. The apparatus of claim 22, wherein said means for collecting said removed ink and other material residue from said anilox roller comprises a gravity-fed liquid collection system.

26. The apparatus of claim 25, wherein said gravity-fed liquid collection system includes at least one liquid drip pan and at least one liquid waste drain line.

27. The apparatus of claim 23, wherein said means for directing at least one jet of high pressure steam onto the surface of said anilox roller and said vacuum collection system are combined into a single cleaning head.

28. The apparatus of claim 27, wherein said cleaning head is adapted to raster-scan the length of the anilox roller as it cleans the roller.

29. The apparatus of claim 28, further comprising a traction unit for raster scanning said cleaning head.

30. The apparatus of claim 27, wherein said cleaning head spans the entire length of the anilox roller.

31. The apparatus of claim 27, wherein said apparatus is a stand alone anilox roller cleaning unit.

32. The apparatus of claim 27, wherein said apparatus is adapted to be temporarily attached to a flexographic print machine for cleaning of the anilox roller thereof.

33. The apparatus of claim 27, wherein said apparatus is adapted to be permanently attached to a flexographic print machine for cleaning of the anilox roller thereof.

34. The apparatus of claim 33, wherein said apparatus is attached to said flexographic print machine using at least one mounting bracket.

35. The apparatus of claim 34, wherein said apparatus is pivotally attached to at least one mounting bracket such that the cleaning apparatus may be pivoted towards said anilox roller to clean it and pivoted away from said anilox roller when not in use.

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